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本期编辑荐读为您精选了发表于Electrochem 关于电化学能源与传感领域的前沿研究，涵盖下一代储能技术、燃料电池关键材料与工程、电化学传感与检测以及电催化与基础电化学等，研究内容从能源材料创新延伸至高灵敏生物传感，从器件工程优化深入到基础理论探讨，呈现多学科交叉融合的研究格局。

1. A Review of Recent Advances in Multivalent Ion Batteries for Next Generation Energy Storage

下一代储能技术中多价离子电池最新进展综述

https://www.mdpi.com/2673-3293/6/4/44

Shah, R.; Marussich, K.; Mittal, V. A Review of Recent Advances in Multivalent Ion Batteries for Next Generation Energy Storage. Electrochem 2025, 6, 44.

2.Exploring DNA Nanostructures as Surface Engineering Techniques for Optimizing Nucleic Acid Biosensor Performance

探索DNA纳米结构作为表面工程技术在优化核酸生物传感器性能方面的应用

https://www.mdpi.com/2673-3293/6/4/40

Pyle, K.; Savrano?lu, N.; Avdan, S.N.; Ahmadi, S. Exploring DNA Nanostructures as Surface Engineering Techniques for Optimizing Nucleic Acid Biosensor Performance. Electrochem 2025, 6, 40.

3.Water Management Strategies for Proton Exchange Membrane Fuel Cells: A Comprehensive Review

质子交换膜燃料电池水管理策略：综合综述

https://www.mdpi.com/2673-3293/6/4/38

Saeed, M.; El-Hameed, M.A.; Al-Hajri, E.; Kabbani, A. Water Management Strategies for Proton Exchange Membrane Fuel Cells: A Comprehensive Review. Electrochem 2025, 6, 38.

4. Charge Transfer Rates Controlled by Frequency Dispersion of Double-Layer Capacitances

电荷转移速率受双电层电容频率色散控制

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5. Chemical Stability of PFSA Membranes in Heavy-Duty Fuel Cells: Fluoride Emission Rate Model

PFSA膜在重负荷燃料电池中的化学稳定性：氟化物排放率模型

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6. Electrochemical Etching vs. Electrochemical Deposition: A Comparative Bibliometric Analysis

电化学刻蚀与电化学沉积：一项比较性文献计量分析

https://www.mdpi.com/2673-3293/6/2/18

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7. Recent Advancements in Na Super Ionic Conductor-Incorporated Composite Polymer Electrolytes for Sodium-Ion Battery Application

钠超离子导体复合聚合物电解质在钠离子电池应用中的最新究进展

https://www.mdpi.com/2673-3293/6/1/6

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8. Tape Casting of NASICON-Based Separators with High Conductivity for Na All-Solid-State Batteries

流延法制备高电导率NASICON基隔膜用于钠全固态电池

https://www.mdpi.com/2673-3293/6/1/5

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9. Electrochemical Sensing of Hydrogen Peroxide Using Composite Bismuth Oxide/Bismuth Oxyselenide Nanostructures: Antagonistic Influence of Tungsten Doping

利用复合氧化铋/硒化铋纳米结构进行过氧化氢电化学传感：钨掺杂的拮抗作用

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10. Low-Volume Electrochemical Sensor Platform for Direct Detection of Paraquat in Drinking Water

用于直接检测饮用水中百草枯的低容量电化学传感器平台

https://www.mdpi.com/2673-3293/5/3/22

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11.Detection of Ovarian Cancer Biomarker Lysophosphatidic Acid Using a Label-Free Electrochemical Biosensor

利用无标记电化学生物传感器检测卵巢癌生物标志物溶血磷脂酸

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12. High C-Rate Performant Electrospun LiFePO4/Carbon Nanofiber Self-Standing Cathodes for Lithium-Ion Batteries

高倍率性能的静电纺丝LiFePO4/碳纳米纤维自支撑正极用于锂离子电池

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13. The Electrocatalytic Oxygen Evolution Reaction Activity of Rationally Designed NiFe-Based Glycerates

合理设计的 NiFe 基甘油酸盐的电催化析氧反应活性

https://www.mdpi.com/2673-3293/5/1/5

Singh, V.K.; Malik, B.; Konar, R.; Avraham, E.S.; Nessim, G.D. The Electrocatalytic Oxygen Evolution Reaction Activity of Rationally Designed NiFe-Based Glycerates. Electrochem 2024, 5, 70-83.

14. Comparison of Different Electrochemical Methodologies for Electrode Reactions: A Case Study of Paracetamol

不同电化学方法在电极反应中的比较：以对乙酰氨基酚为例

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Masood, Z.; Muhammad, H.; Tahiri, I.A. Comparison of Different Electrochemical Methodologies for Electrode Reactions: A Case Study of Paracetamol. Electrochem 2024, 5, 57-69.

15. Use of Inner/Outer Sphere Terminology in Electrochemistry—A Hexacyanoferrate II/III Case Study

电化学中内/外球术语的使用——以六氰合铁(II/III)为例的案例研究

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期刊介绍

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期刊Electrochem (ISSN 2673-3283) 创刊于2020年，最新CiteScore 7.4，在材料化学领域位于Q1，是一个国际性、经同行评审的开放获取英文学术期刊，研究范围涵盖与电化学研究相关的各个方面。期刊旨在为电化学及其应用研究提供一个先进的交流平台，鼓励科学家尽可能详细地发表他们的实验和理论成果。目前 Electrochem 已被Scopus、DOAJ、CAPlus/SciFinder、EBSCO等多个重要数据库收录。

期刊领域包括但不限于：

对电化学原理和机制的探索；电化学材料及其应用；生物电化学、电化学分析与检测；能量转换与储存，如电化学能量转换与储存、光电化学电池；电化学表面科学等。

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